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ADMINISTRATIVE LAW ACTIVITIES OF THE MINISTER RESPONSIBLE FOR TOURISM IN EXPERIMENTAL RESEARCH ON TOURIST TRAFFIC – CASUS POLAND

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Abstract

This article discusses the administrative and legal activities of the minister responsible for tourism in the field of experimental methods of studying tourist traffic. These methods include the use of many data sources, the so-called big data. The discussion will cover cooperation with South Korea and domestic entities – including Statistics Poland and the National Bank of Poland. The research methods used in the article are the comparative method, which requires a comparison of Polish and South Korean regulations. Additionally, the dogmatic-exegetical method was used, which requires familiarization with the existing literature. The article aims to show good patterns in experimental methods of studying tourist traffic and encourage readers to learn about modern technologies in this area planned for use in Poland. This article was written as part of the activities of the steering committee of the project Advanced AI tools and algorithms based on public data supporting economic development in the field of tourism, co-financed by the National Centre for Research and Development under the Strategic Research and Development Program Advanced information, telecommunications and mechatronic technologies – INFOSTRATEG VIII.

Keywords: *regulations; South Korea; law; travel traffic; Poland, statistics*

1. Introduction

On 11 February 2015, the Polish Minister of Sport and Tourism signed a tripartite agreement between the Ministry of Sport and Tourism, Statistics Poland and the National Bank of Poland. Under the agreement, Statistics Poland carries out surveys in the field of tourism. In order to ensure access to the results of all the surveys, reports on them are drawn up by representatives of the Department of Tourism of the Ministry of Sport and Tourism. Of main importance are statistical surveys on inbound and outbound tourism and on domestic tourism, which are conducted, pursuant to the agreement, by a designated department of the Statistical Office in Rzeszów. The surveys, conducted on annual basis, cover inbound trips to Poland by non-residents of the country, i.e. persons who do not reside permanently in Poland (Agreement, 2015) as well as domestic trips and outbound international trips made by residents of Poland (STAT, 2022). Notably, the group of non-residents who visit Poland

includes also Poles who have moved to another country and have lived there for over a year (i.e. are residents of other countries now) (GOV, 2023). This is reflected by the results of the surveys, gathered over the years: the structure of arrivals by purpose of travel shows that the main purpose is to visit people who live in Poland, and the dominant type of accommodation used during the visits is staying with family members or friends, etc. (STAT, 2022).

2. Public statistics

The surveys are part of a programme of statistical surveys conducted by the national statistical offices in accordance with the rules adopted for a given European Union (EU) Member State. The requirement to develop an annual Public Sector Programme of Statistical Surveys in Poland arises from Article 18(1) of the Act of 29 June 1995 on Public Statistics. The Act requires the Council of Ministers to adopt such a programme on annual basis (ZPP, 2024). According to the agreement mentioned in the opening part of this paper, the annual public sector programme of statistical surveys has to cover the following subjects:

1. Tourist accommodation base and its use;
2. Border traffic;
3. Activities of selected organisations connected with the tourism sector;
4. Visits to Poland by non-residents. Traffic of vehicles and persons at Polish borders with the European Union member states;
5. Polish residents' participation in travels. (Statistical Analyses, 2023).

The main difficulty regarding the surveys is the time of waiting for their results. The individual categories of results in the form of statistical information are required to be made available on annual, semi-annual or quarterly basis. For example, results relating to border traffic and on inbound visitors' expenditure in Poland and Poles' expenditure in other countries are published in October of the following year. Summary information is published on quarterly basis i.e. in June, September and December of the year covered by the survey, and in March of the following year (Statistical Yearbook, 2024).

The surveys are mainly based on the traffic of Polish and foreign citizens, broken down by: border crossings and their types; months, sections of the border; arrivals; departures.(BIP, 2018). The passenger traffic is analysed by seaports and airports, and by means of transport used – by rail, road, sea, air or river. The aim of the survey is to provide information on tourists' estimated expenditure in Poland (hence the cooperation with the National Bank of Poland, conducted under the agreement) and on the size and structure of inbound tourism and means of transport used by visitors. The European law acts that require the conduct of the tourism sector surveys include in particular: Regulation (EC) No 184/2005 of the European Parliament and of the Council of 12 January 2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment (OJ L 35 of 08.02.2005, p. 23, as amended) (Regulation (EC) No 184/2005), Regulation (EU) No 692/2011 of the European Parliament and of the Council of 6 July 2011 concerning European statistics on tourism and repealing Council Directive 95/57/EC (OJ L 192, 22.07.2011, p. 17, as amended) (Regulation (EU) NO 692/2011) and Commission Delegated Regulation (EU) 2019/1681 of 1 August 2019 amending Regulation (EU) No 692/2011 of the European Parliament and of the Council concerning European statistics on tourism, as regards the transmission deadlines and adaptation of Annexes I and II (OJ L 258, 9.10.2019, p. 1) (Commission Delegated Regulation (EU) 2019/1681).

The aim of the surveys is to determine the characteristics of visits to Poland by inbound visitors and to estimate their expenditure in the country. The data facilitates future business model planning by tourism enterprises. Unfortunately, the required frequency of data publication is not satisfactory, which is realised both by the tourist enterprises and decision-makers and thus action has been taken to change the situation.

To this end, cooperation at government level has been established with South Korea as a leader in modern forms of research on travel and tourism traffic (Korea Republic, 2023). Tourist traffic is global in nature, the regulatory environment shaped at the international level is of fundamental importance, with national policies playing a secondary role (Sitek, 2025, 14).

3. Cooperation with South Korea

In the last 25 years, South Korea has become a country that sees potential among developing countries and is often their donor (Big Data, 2023). As a world leader, it shares its experience and co-finances the implementation of its experience in specific sectors. One of the programmes using this model is KSP – Knowledge Sharing Programme launched in 2004 by the Ministry of Economy and Finance of South Korea with the aim to share knowledge in the areas of economy and research (KSP, 2022).

Within the programme, on 14 February 2023 an agreement on the implementation of the project entitled *The use of Big Data sources in monitoring changes in tourism* was concluded by President of Statistics Poland Dr Dominik Rozkrut and representative of the Korean consortium Mr Tae Yong Yoon, Senior Advisor to the Korean Import and Export Bank (KEXIM BANK) (Big Data, 2023).

The objectives agreed by the parties included:

- determination of the current legal status of big data sets in Poland;
- diagnosis of the use of big data sets by public administration entities (Statistics Poland, Ministry of Sport and Tourism);
- identification of new (experimental) data sources to be used in tourism traffic research;
- testing the linking and use of big data sets;
- clarifying the objectives and scope of the project;
- development of the cooperation and implementation of proposed solutions. (KSP 2022/2023).

Under the agreement, a number of bilateral meetings of representatives of the Polish and Korean sides were held (BIG DATA STAT 2023).

On the Korean side the project was implemented by KEXIM BANK and the selected team of consultants (Kyung Hee University Consortium), composed of:

- Kyung Hee University,
- Ars Praxia Corporation,
- KT Corporation (Big Data STAT, 2023).
- On the Polish side, the project was implemented by:

- Statistical Office in Rzeszów (the designated unit of Statistics Poland),
- International Cooperation Department of Statistics Poland (coordination and organisation tasks),
- Ministry of Sport and Tourism (Department of Tourism) (Borek, Wyrwicz, 2023).

An important element of the implementation of the agreement was the participation of Polish representatives in an internship in South Korea from 4.06.2023 to 10.06.2023. (Big Data, 2023).

During the internship, the participants visited the Korea Tourism Organization Seoul Center as well as Korea Telekom. In addition, the Polish side delivered lectures together with Korean representatives at Kyung Hae University in Seoul (Shah, Wever, Espig, 2025). The internship in the capital of Korea was summarised during the mid-term report meeting. At the end of the stay, the participants visited Jeju Tourism Organisation in Jeju Island. There, the Polish side presented their ideas and gave a lecture at Jeju National University (Zeqiri, Ben Youssef , Maherzi Zahar, 2025).

At Kyung Hae University, the Polish side delivered the following lectures:

Mr. Dominik Borek (Ministry of Sport and Tourism) – *Management of the public sector of tourism – organisational and legal aspects. Casus Poland*;

Mr. Marek Cierpiał-Wolan (Statistical Office in Rzeszów) – *Big data and statistics – challenges and prospects*.

All the activities contributed to the development by the Korean side of the final report that summarised the recommendations for the Polish side (Zeqiri, Ben Youssef , Maherzi Zahar, 2025). In September 2023, an analysis of the current legal status was presented together with recommendations on conducting research in the current legal circumstances as well as conclusions de lege lata and de lege ferenda. (Bag, Rahman, Srivastava, Shore, Ram, 2023).

Korean regulations

South Korea has legislative acts that govern access to and processing of big data. The regulations, although general and abstract in nature, apply also to the area of tourism and tourism traffic research. The first of the legislative acts is the Personal Information Protection Act, amended by Act No. 11690 of March 23, 2013. In Article 28-2 (Processing of Pseudonymous Data), data pseudonymisation and processing for the needs of statistical research is regulated in points 1-2:

1. A personal information controller may process pseudonymized information without the consent of data subjects for statistical purposes, scientific research purposes, and archiving purposes in the public interest, etc.
2. A personal information controller shall not include information that may be used to identify a certain individual when providing pseudonymized information to a third party according to paragraph (1) (KLRI 2013C).

The above shows that personal data may be used also for tracking tourism flows but under certain conditions. The main one is data pseudonymisation that has to be used in all cases. Pseudonymisation, as opposed to anonymisation, is a reversible process and usually involves the removal of additional information that makes it possible to identify a given person. (COHEN 1996).

Another regulation discussed in the KSP report is the *Act on Promotion of information and communications network utilization and information protection*, thoroughly amended by Act No. 6360 of January 16, 2001.

According to Article 48(2), any of the following persons shall furnish the Minister of Science and information and communications technology (ICT) or the Korea Internet and Security Agency with the information related to computer security incidents, including statistics by type of computer security incidents, statistics of traffic of the relevant information and communications network, and statistics of use by access channel, as prescribed by Presidential Decree (KLRI 2013).

The above shows that it is possible, and in some cases even obligatory, to conduct statistical research based on the use of online systems. It is worth pointing out that pursuant to that Act, the Korea Internet and Security Agency

was established in order to upgrade information and communications networks (excluding matters regarding establishment, improvement, and management of information and telecommunications networks), encourage the safe use thereof, and promote the international cooperation and advancement into the overseas market in relation to broadcasting and communications (KLRI, 2013B).

The above-mentioned regulations show that in South Korea there is also a legal basis for the processing of big data on internet users. This can be very useful for tracking tourist flows, e.g. using logins internet users' (Global Positioning System) GPS application logs. The solution makes it possible to show the movements of specific travellers within a given territory.

Another document in force in South Korea is *Credit information use and protection act*, thoroughly Amended by Act No. 9617 of April 1, 2009, (KLRI 2009).

The document makes it possible to track card payments made for purposes relating to tourism. The data on the transactions has to be appropriately anonymised and may then be used for statistical purposes only. Such transaction data reflect consumer preferences and enable the taking of successful business decisions, including on investments to be made. For example, based on the 'tracking' of card payments one can determine the types of transactions made most frequently by United States tourists after arriving in Seoul. Having the awareness of products purchased by them most often, such as burgers with fries, a decision can be taken e.g. to build a fast-food bar. Such information, combined with data on the number of transactions/arrivals of visitors of a specific nationality allows for business profiling to tailor it perfectly to consumer needs.

The next regulation is the *Act on promotion of the provision and use of public data*, amended by Act No. 12844 of November 19, 2014. The document established a new entity for statistical research, similarly as the *Act on promotion of information and communications network utilization and information protection*, thoroughly amended by Act No. 6360 of January 16, 2001, that established the Korea Internet and Security Agency (Jung, Han, Lee, 2001).

The entity newly established under Article 13 (Public Data Utilization Support Center) of the *Act on promotion of the provision and use of public data* is the Public Data Utilization Support Center that is answerable to the National Information Society Agency (Fang, Zhao, Li, 2024).

The Public Data Utilization Support Center operates also under Article 14 of the Framework Act on National Informatization to efficiently provide support for promoting the provision and use of public data.

The Public Data Utilization Support Center shall perform the following:

1. Surveys on and research for policies and systems for the provision and use of public data;
2. Support for processing and management of public data to be provided and for the formulation and implementation of master plans and implementation plans;
3. Public relations for use of public data and support for business start-up, education and training related to public data;
4. Support for cooperation with the private sector and other countries regarding public data and also for investigations into the actual conditions of developing and providing overlapping or similar services;
5. Assistance in obtaining authorization to use copyrighted works and other public data to promote the provision and use thereof and in registering the lists of public data and for the management of information so registered;
6. Support for the announcement of the lists of public data, list information service, diagnosis, evaluation, and improvement of the quality of public data (KLRI 2017).

The above-mentioned responsibilities reflect the very broad powers of the established entity. It is not a typical solution in which all aspects of access to information and its use in the private sector remain within the responsibility of a centrally established entity. In South Korea, in contrast to European Union member states, public information is promoted among the private sector in order for it to undertake activities aimed at creating new business tools and developing the economy. In Europe, the dominant model is the one of individual access to public information on request. Thus, there are barriers to one-to-one implementation of the Korean solutions. The solutions proposed by the KSP experts are, however, in line with the European realities. At the same time, the existing barriers have been highlighted and some legislative

changes have been suggested to enable much broader use of big data sources (Stefaniak. 2018).

The main conclusion of the Korean team is that there is a possibility to effectively implement a system of experimental research on tourism traffic at the level of an EU Member State, in this case of Poland. This, however, would require successful business talks and selection of international partners. The KSP report states that two basic data sources would be sufficient if supplemented by data from public administration sources, e.g. public registers. The two basic sources are data from payment card operators (data on payment flows, of course after anonymisation) and data on mobile phones logging to Base Transceiver Station (BTS) masts. (Fanelli, Patrici, Salvatore, Donelli, Zangrandi, 2023).

5. Proposal for Poland

What proposals have been developed in Poland based on the KSP report conclusions?

Using the South Korean experience, it has been suggested to develop an Information Technology (IT) solution to support the monitoring of tourist traffic in Poland. The implementation of the project is needed because the market lacks tools for monitoring the actual size of tourist traffic across Poland in real time. As mentioned in the opening part of this paper, the main barrier regarding research on the tourism sector in Poland is the waiting time for the results of the analyses conducted by Statistics Poland. The data on current tourist traffic and its structure as well as its predictions will make it possible to develop instruments for actively stimulating and channelling tourist traffic in accordance with the idea of sustainable development.

The current data will make it possible for the tourism industry to obtain reliable information based on which decisions will be taken on investing in the hotel, restaurant, catering and hospitality support industry. For developing such a tool, so-called *big data* should be used. The two pillars of the system, according to the KSP specialists, should be mobile network logs (BTS) and data on payment card transactions. To this end, it is sufficient to have

data from two or three mobile networks operating in Poland (e.g. T-Mobile, Orange or Plus) and two payment card operators (Visa and Mastercard). The data should be processed using Artificial Intelligence (AI) tools that generate a graph of tourist traffic load. The two pillars should be supplemented with significant additional information to comprise the big data sources, i.e. information from the state registers of: accommodation facilities – the database of the Minister of Sport and Tourism; air traffic – the database of the Civil Aviation Authority, and traffic on motorway gates – data from the General Directorate of National Roads and Highways (Dobrzyński, Borek, 2024). This should be accompanied by data from Statistics Poland and commercial data, coming e.g. from web scraping of booking systems. The multiple sources of data would make it possible to link it and draw required conclusions. It should be borne in mind, however, that the main barrier to this can be the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679). According to Article 89(1), processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes, shall be subject to appropriate safeguards, in accordance with this Regulation, for the rights and freedoms of the data subject. (Regulation (EU) 2016/679).

The regulation safeguards the interests of individuals. It is of significance that in the EU regulations, the interests of individuals precede the public interest (Francis, 2017). The Korean legislation mentioned in this paper seems to adopt the opposite approach. It is the public interest that is oaf main importance in accessing information and using it for public purposes such as development of new technologies, business activities, etc. Apart from the implementation of appropriate safeguards in EU member states, the introduction of a tourist traffic monitoring system should be viewed as statistical research. As regards GDPR, it is worth quoting recital 162 of the regulation, according to which, where personal data are processed for statistical purposes, this Regulation should apply to that processing (Regulation (EU) 2016/679).

In view of the above, a natural question may arise whether the model considered in Poland meets the definition of so-defined *statistical purposes*? At the project level it cannot be excluded that the system will be used not only for research but also for commercial purposes. Does commerciality exclude the statistical purpose? It seems not because statistical purposes imply data collection

operations. The quoted recital does not refer to the consequences of collecting such data. It is of primary significance that the data does not make it possible to identify a specific natural person. It would therefore seem legitimate to make an extensive use of a model to be built based on the South Korean solutions.

The present considerations relate to administrative law, hence the conceptual apparatus used comes from this field of science. The aim of these considerations is not to describe technical issues but to show the legal barriers and analyse the possibilities that open up in connection with the planned modern methods of tourist traffic monitoring. The project, if implemented, will result in the provision of the following services:

- information on current tourist traffic load in a given area (so-called heat map);
- information on current tourist traffic and forecasted tourist traffic (predictions);
- monitoring of tourist traffic changes, trends and factors that influence them (DOBRZYŃSKI, BOREK 2024).

6. Summary

All the effects described above will be of assistance not only for entrepreneurs but also for central government and local government tourism administrations. The knowledge on real tourist traffic will e.g. make it possible to counteract the phenomenon of the grey zone in tourism that results from conducting non-registered business activity. The broad use of the experimental methods for tourist traffic tracking, discussed in this paper, shows how important this reception area is. However, as Saint John Paul II pointed out, taking note of the enormous possibilities, one should always add to the positive evaluation, appeal to considerations that go beyond enthusiasm, and reflect and consider what powers of suggestion such media have (JOHN PAUL II 1981 B). After all, man *stands above all other creatures and has a duty to look above and beyond them.* (JOHN PAUL II, 1981 A). The dogmatic and empirical research methods applied in this paper have shown how important the issue under consideration is. Apart from the construction

of the ICT infrastructure as such, of great importance will be administrative actions of the minister responsible for tourism, including contracts and agreements to be signed. A broader assessment is required, for which there is no space in this paper, of whether the required activities fall within the scope of powers of the minister responsible for tourism. This scope should be analysed in a separate scientific monograph relating to Polish regulations, which could be an interesting case study and analysis of experience that would support the development of the Bulgarian model of tourism management in the public sector. Thanks to the extensive cooperation with Poland in the field of tourism, Bulgaria can draw on our experience in the field administrative principles for regulating the tourism service market.

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